



GESTÃO INTERNACIONAL

AN ANALYSIS OF THE ORGANIZATIONAL STRUCTURE AND THE PROCESS TO ADOPT GLOBAL SOURCING

ANÁLISE DA ESTRUTURA ORGANIZACIONAL E DO PROCESSO PARA ADOÇÃO DE GLOBAL SOURCING

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ABSTRACT

This study analyze the adoption of GS by Brazilian companies in terms of organizational structure and process of GS in order to identify what is differencing the experience of these companies and the previously knowledge related with GS. A case-based qualitative research was developed. Four Brazilian companies were investigated. Data were collect interviews and a content analysis was made. Regarding the organizational structure, it was identified that the firm's industry sector influence in the adoption of GS. It confirms the assumption that the environment plays an important role in emerging countries. The need of innovation and the geographic concentration in an industry sector were identified as influences in the organizational structure to adopt GS. The need of scale in the purchasing process was perceived as an influence in the process of GS. The investigated companies presented a non-structure process of GS, what reduce the opportunity to learn with GS as part of the process may not be monitored.

KEYWORDS

Global Sourcing. Organizational Structure. Supplier's Management. Purchasing Process. Brazil.

RESUMO

Este estudo investiga a adoção de GS por empresas brasileiras com relação a estrutura organizacional e o processo de GS visando a identificação das diferenças entre a experiências destas empresas e o conhecimento prévio sobre GS. Foi desenvolvida um estudo qualitativo baseado em casos. Quatro empresas brasileiras foram investigadas. Os dados foram coletados através de entrevistas e uma análise de conteúdo foi desenvolvida. Com relação à estrutura organizacional, foi identificado que o setor industrial influencia a adoção de GS. Este resultado confirma a influência que o ambiente exerce nas empresas emergentes. A necessidade de inovação e a concentração geográfica do setor industrial foram identificadas como influências na estrutura organizacional para a adoção de GS. A necessidade de escala nos processos de compras foi identificada como uma influência no processo de GS. As empresas investigadas apresentam um processo não-estruturado de GS, o que reduz a oportunidade de aprendizagem através do GS pois parte do processo pode não ser monitorado.

PALAVRAS-CHAVES

Global Sourcing. Estrutura Organizacional. Gestão de Fornecedores. Processo de Compras. Brasil.

INTRODUCTION

Firm's organizational structure and sourcing process to adopt Global Sourcing (GS) are two of the main investigated topics related with sourcing in international environments. Studies like Arnold (1989; 1999), Trent and Monczka (1998; 2003; 2003a), Kotabe and Murray (2004), Hartmann, Trautmann and Jahns (2009) are examples of studies that investigated GS considering companies from developed countries as the ones that were sourcing globally. Usually these companies source from developed and emerging markets. No company from an emerging country was considered as the sourcing one.

One could affirm that the assumptions that were already identified will probably be the same to emerging countries companies

(EMCs). However, the literature related with emerging countries confirmed that this replication does not happen in all cases and some peculiarities of the emerging country may change the way their companies implement business strategies. Investigating the foreign direct investment made by emerging companies, Zhao, Liu and Zhao (2010), Tolentino (2010), Kalotay and Sulstarova (2010) and Li and Yao (2010) identified a change in the way ECMs develop relationships in their internationalization processes. Investigating the role of emerging company subsidiaries, Barnard (2010) identified that the availability of a better supplier base in the host countries rather than in the home country has led emerging company subsidiaries to develop capabilities that are useful beyond their immediate loca-

tions. At the same time, Sirkin *et al.* (2008) argues that EMCs are presenting a fast internationalization process, characterized by bold and aggressive methods in the early stages of the process. Gammeltof, Barnard and Madhock (2010) argue that there is a need to test the knowledge produced about the management of companies from developed markets in EMCs.

Based on this need, this study was previously focus at the understanding of the organizational structure and the sourcing process to adopt GS in EMCs. The investigation of EMCs reveals that the environment plays an important role in these countries companies. EMCs are characterized by (1) being mature and integrated, (2) having grown in markets that were protected from international competition, (3) intensely using natural and human resources, and (4) operating in extremely turbulent environments (KHANNA; PALEPU, 1999; FLEURY; FLEURY, 2007). A delimitation was required and we decided to focus this study on Brazilian companies. These companies were primarily perceived as exporters in global markets and their involvement in operations abroad is recent (FLEURY; FLEURY, 2007). Their late internationalization was motivate by the entrepreneurial leadership of the companies' owners, which has allowed companies to undergo fast internationalization processes (FERNANDES; SEIFER JÚNIOR, 2007). It was influenced by the protection of its domestic market until the beginning of the 1990s and this situation may had influenced the way they source globally. As a result of these delimitations, we analyzed the adoption of GS by Brazilian companies in terms of organizational structure and sourcing process in order to identify what is differencing their experience and the previously knowledge related with GS.

CONCEPTUAL FRAMEWORK

Samli and Browning (2003) argue that international sourcing is being used to close the gap between the strategic approach of a firm and its efforts to integrate its process to implement this strategy. The term 'global sourcing' emerges as the approach to the adoption of the strategic sourcing on a global basis. GS means a strategic orientation for the search and monitoring of global suppliers and an efficient management by integrating and coordinating activities related to the functional areas as well as units of local purchases (NUNES; VIEIRA; ANTUNES JR., 2013).

The structuring of a company's resources, process and supplier management are some of the aspects that must be included in the GS management process. We considered organizational structure as the determination of the roles, power, responsibilities, control, coordination and information flows between the different levels of management in order to bring together functions, people and other resources to achieve the companies' objectives. The decisions related to configuration and coordination are key dimensions of an internationalization strategy (PORTER, 1986). A third element was included in this concept to investigate organizational structure: information. This element was add because it allows us to understand how a process flows through the organizational structure. Based on the literature review of GS, it was identified a set of constructs that were already used to investigate companies' organizational structure related to GS. We used these constructs as a way to guide our research. Figure 1 presents these constructs and their literature reference.

FIGURE 1 – Constructs of the dimension Organization Structure

Construct	Literature reference
Centralization <i>versus</i> decentralization	Arnold (1989; 1999)
Interaction with other functional areas	Quintes, Pauwells and Matthysens (2006) Gelderman and Semeijn (2006) Hartmann, Trautmann and Jahns (2008) Trautmann, Balls and Hartmann (2009)
Formalization	Hartmann, Trautmann and Jahns (2008)
Firm's features	Arnold (1989) Trent and Monczka (2003) Knudsen and Servais (2007)
Top management support	Arnold (1989)
Organizational level of decision making	Trent and Monczka (2003) Quintes, Pauwells and Matthysens (2006)
Internal articulation between areas	Trautmann, Bals and Hartmann (2009)
Presence of sourcing company in suppliers' markets (structure, motivation, and relations with centralization and decentralization)	Trent and Monczka (2003) Harris (2006) Mulani (2008)

Much of the discussion about GS focus on centralization *versus* decentralization of international purchasing (ARNOLD, 1989; MONCZKA; TRENT, 1991; TRENT; MONCZKA, 1998; 2003; 2003a; ARNOLD, 1999; TRAUTMANN; BALS; HARTMANN, 2009). To Quintes, Pauwells and Matthysens (2006), a high degree of centralization and coordination ensures better results in the generation of value through the activities of international supplies. The necessity to coordinate these activities emerges when considering that a company will perform purchasing activities on a local and global basis like presented by Gelderman and Semeijn (2006) to whom the management of suppliers in various markets increases the complexity of organizational management and there is a need for attention in the management of internal and external interfaces. Aspects of formalization became important to the management of GS when dealing with companies with different subsidiaries and purchase units. Hartmann, Trautmann and Jahn (2008) found that, with

respect to the formalization, the focus must be on the definitions about governance and standards, process and control.

Looking at the company configuration to implement GS, it is possible to affirm that there are some requirements to implement it: company's size (ARNOLD, 1989; TRENT; MONCZKA, 2003; KNUDSEN; SERVAIS, 2007); the inferior position given to the purchase area that can limit the ability to take advantage of opportunities due to internal neglect (ARNOLD, 1989; QUINTENS; PAUWELS; MATTHYSSENS, 2006); and the company's structure is the presence of the purchaser at the supplier country (TRENT; MONCZKA, 2003; HARRIS, 2006; MULANI, 2008).

The process of GS is considered as the process of the purchasing area to promote the entrance of inputs in the materials sourcing flow, and it must be considered that this area is not responsible just for the supply of materials, as services are also related. The investigation of a sourcing process involves the study of (1) the

selection and development suppliers and (2) the analysis of the participation of the purchase areas in the supply materials flow (LIMA, 2004). We divided this process in two dimensions: the suppliers' management aspects and the purchasing process. Based on the literature review of GS, it was identified a set of constructs that were already used to investigate companies' process of GS. We used these constructs as a way to guide our research. Figure 2 summarize these findings.

The involvement of other business functions reflects the support given to the strategic purchase function and alignment of this activity with the company's strategic planning. To Trent and Monczka (1998), the tendency to concentrate the company's purchases generates an expansion of the need for supplier development. Traditional supplier management models highlight the involvement of suppliers in the business, however, they do not make the distinction between local and global (KAMATH LIKER, 1994; CEBI; BAYRAKTAR, 2003). There is a need for qualified personnel working with GS activities. They

must be able to make presentations and communicate effectively, to think holistically through a company or region, and to work in an environment of cultural diversity (TRENT; MONCZKA, 2003a; MULANI, 2008). The availability of communication tools is another aspect to be consider in a company's structure. The success of GS depends on a high level of transparency that leads to the pro-active cooperation between the members of the supply chain, the identification of what is happening and the management of situations that are inconsistent with the initial planning (WILDING; BRAITHWAITE, 2007).

RESEARCH DESIGN

According to Yin (2001), the case study method allows the research to investigate the phenomenon within its real-life context, especially when the boundaries between phenomenon and context are not clearly defined. As we were investigating GS in a different environment comparing with the previously theory, the use of a case-based approach was supported by Stuart *et al.* (2002), to whom a case research meth-

FIGURE 2 – Dimensions, constructs and literature references

Dimensions	Construct	Literature references
Suppliers' management	Suppliers' selection	Trent and Monczka (1998)
	Suppliers' development	Trunick (2006)
	Indicators	Bozarth, Handfield and Das (1998)
	Suppliers' relationship management	Salmi (2006) Knudsen and Servais (2007) Ghuri, Tarnovskaya and Elg (2008)
Purchasing process	Input features	Smith (1999)
	Use of purchasing portfolio	Gelderman and Semeijn (2006) Trautmann, Balls and Hartmann (2009)
	Sourcing team (professional's knowledge and skills, training and benefits program, empowerment)	Trent and Monczka (2003a) Mulani (2008)
	Communication tools (availability, communication and information flows, information accuracy, learning process)	Trent and Monczka (2003) Wilding and Braithwaite (2007)

odology is appropriate when theory exists but the environmental context is different. The use of a case-base qualitative approach was also supported by Barrat, Choi and Li (2011), to whom it is also appropriate when the focus relies on the exploration and better understanding of an emerging, contemporary phenomena or issues in their real world settings.

A set of four companies that adopt GS, according to Trent and Monczka's continuum (2003). These companies were selected with the support of their industry association. A meeting was made and a group of suitable companies was identified. The association sent emails to the companies, presenting the research project and asking senior managers if they could take part in the research. The support of the association was fundamental in order to access these senior managers. The companies were then selected according to convenience and availability.

The electrical and electronics industry in Brazil can be regarded as an import industry. From 2003 to 2010, total imports in this sector increased by 47%, representing USD 24.882 million. The importance of imported goods in this industry can also be seen in the percentage of imports within the internal market for end-products that reached 21.6% in 2010. The state of Rio Grande do Sul has the second-largest cluster of companies working in this industry. Most of these companies are financed by local capital and manage by the owners.

The four investigated companies were founded in the 1980s and the 1990s. They present a tendency to supply from emerging and developed countries at the same time, and as exporters, they have a more intense market share in Latin America. The

companies agreed to participate if not identified, and the presentation of the companies was focused on the sourcing strategy and activities, not on the company history and strategy.

The first source of evidences were documents. Reports from the company, its industrial association and from the government were also used during the research. The documents were used to corroborate and enhance the evidence from other sources, with particular attention to the structured interviews, the second source of evidences. The interviews conducted during the study were spontaneous and allowed the researcher to ask the respondents about key facts as well as their opinion on certain issues. One in-deep interview was conducted in each company. At Company A, the interviewee was the owner/director who had worked there since the company's foundation. The interview lasted two hours 33 minutes. At Company B, the interviewee was the manager, who had worked there for 13 years, and the supervisor, who had worked there for 10 years. They were interviewed together for two hours 19 minutes. At Company C, the interviewees were the controller and manager that were interviewed together for two hours 25 minutes. They had both worked at Company C for 14 years. And at Company D, the interviewee was the owner/director, who had worked there for 12 years. The interview lasted two hours 10 minutes. The direct observation was used as the third source of evidences. All interviews were preceded or followed by a visit to the companies' site.

A questionnaire was developed based on the conceptual model. It includes both open and closed questions. The recorded

interviews were transcribed and these documents were analyzed with the support of NVivo®. We use the constructs identified at the conceptual model as tags to select parts of the interviews that were related with each construct. Every transcription were read at least three times. After that, NVivo® were used to read the fragments of the interviews. The fragments were read several times in order to extract the conclusions about each construct. Parts of the documents were tag as new knowledge discovered during the study. At the first moment these new knowledge were selected and after a deep investigation new tags were created. Another read was made in each interview in order to identify new fragments related with the new tags. Information from the companies' documents and the direct observation were also included at the NVivo® data base and a similar tagging process was made. Through this process, we assure that a content analysis was made. According to Bardin (2002), the phase of data analysis must be perceived as an interaction process, with an objective and a subjective view. It was possible to assure the construct validity and the reliability of the research. The findings of the study will be present in the sequence.

THE ORGANIZATIONAL STRUCTURE OF COMPANIES TO ADOPT GS

The investigated companies have centralized manufacturing processes with their production units only located in Brazil. Only Company B and Company C have units abroad. The decisions related to sourcing activities are centralized in all companies. The offshore unit of Company B is responsible for negotiations with

the local suppliers as well as the shipping process. This unit helps reduce the cultural distance between the home and the host countries. The overseas unit of Company D is responsible for monitoring the sourcing opportunities and supporting the sourcing activities.

The internal organization of the company for the development of GS may provide greater opportunities to achieve the desired advantages. To better understand coordination, the interaction with other functional areas was investigated. Company A, Company B and Company D present their interactions with the areas responsible for the development of new products (engineering and R&D) but with limitations in the decision-making process, which may be related to difficulties in the negotiation step.

The four companies are concerned with the formalization of the activities and the reduction of dependency to one professional. Company A's interviewee highlights that it is important to formalize the costs related to the time spent searching for new suppliers into the cost structure of the development process. "We allocate hours and control them [...] they are costs too." The interaction is formalized in Company B through weekly meetings with the production area but still lacks interaction with R&D. Company C and Company D also report the need to use a better formalized process: they present better interaction processes, although they are primarily informal.

The close relationship between R&D and engineering is viewed as an opportunity to increase the benefits of GS, but these processes must be formalized as a way to transfer knowledge between areas

and professionals. These two activities can be considered key aspects for the organizational structure of GS. Figure 3 summarizes these findings.

The next investigated aspect was related to the availability of resources for establishing and managing GS. The first was the firm’s features. The first aspect cited by Company A is the company’s entrepreneurial posture. “Compared with other companies from the same industry, we were pioneers in sourcing abroad,” said the interviewee. Pioneering leads the company to achieve competitiveness based on the ability to perform GS, avoiding the intermediary companies in their supply chain, such as the distributors located in Brazil. Company B and Company D share the same feature: entrepreneurship. Company B also includes innovation as their main characteristic. The exposure to global suppliers is forcing the company to improve their process to be able to introduce more innovative products into their market. Company C’s interviewee highlights the company’s global mindset and the importance to “have a broad knowledge [...] know that the world is changing, and start to act globally, or you will be outside the market.” Another aspect of success is the internal structure: interaction occurs between the areas to develop new products and find new sourcing opportunities to increase competitiveness.

The second investigated aspect is

top-management support. Company A makes an effort for the top-management level to support GS because negotiation is primarily conducted by the company’s owners. The same behavior is identified at Company B, Company C and Company D. At Company B, the top-management support is also identified in the need for internal articulation between areas. Company C is the only company that presents an indicator related to global sourcing, local sourcing *versus* global sourcing.

Company D highlights the importance of alignment between the top management and the engineering areas to identify the supply opportunities abroad. The findings presented above are also related to the third aspect investigated, the organizational level of decision-making. Decisions related to the establishment of a relationship with a supplier are performed by the top management, while operational decisions are made by the sourcing areas in the four investigated companies.

The fourth investigated aspect is the internal articulation between areas. The four companies identified the necessity for the establishment of a closer relationship between the areas of sourcing, engineering, R&D and sales. This internal articulation was perceived to be less strong at Company B; this could be related to company size, as Company B is the biggest company in the sample.

A new aspect was identified at the cases

FIGURE 3 – Key aspects related with organizational structure – Part 1

Investigated aspect	Tendency
Centralization <i>versus</i> decentralization	Centralization
Interaction with other functional areas	Stronger between engineering and R&D Weaker with Sales
Formalization	Formal and informal

studies: the industry's characteristics. This aspect was not previously identified at the literature review. Company A's interviewee highlights this aspect. The interviewee notes that when the company was small, it could purchase from a distributor located in Brazil, as they grow it becomes competitive only if it looks abroad for the original suppliers. This happened because the company's industry is global: "the evolution at the electronic area is huge – what leads us to the need to be aware of new technologies and suppliers." Innovation was identified as essential to the industry; however, innovation can be a facilitator or a complication. To Company B, the need for innovation necessitates that the company must use inputs that may not be accepted by the market, which can increase its risks.

Company C and Company D bring up the geographic concentration of companies that attract suppliers to be closer to them because they facilitate the approach of a larger number of potential clients to the supplier units. Company C also considers the concern related to the deindustrialization process to be an important aspect with respect to its industry's characteristics: "there is a fear related to deindustrialization in Brazil, as a consequence of the development of Asian markets." Company C considers that the industry must be aware of this movement and must make efforts to ensure that local competitiveness is retained.

According to Trent and Monczka (2003), companies that engage in GS are larger and more likely to have multi-regional or global competitors in comparison to companies that make international purchases. The same situation was observed for these companies' industries: global competitors exist in their local markets, and they have a global basis of suppliers, which leads them to be more open to global strategies. Figure 4 summarizes these findings.

The next investigated aspect is related to the presence of the purchasing company in the supply country. Only Company B and Company D have an established presence in the supplier country. Company B has two sourcing offices: one is located in the U.S., and the other is located in Germany. These two units are related to supplier management and negotiations with local suppliers. The establishment of these units was motivated by the necessity to reduce the cultural distance between the

Figure 4 summarizes these findings.

FIGURE 4 - Key aspects related with organizational structure – Part 2

	Company A	Company B	Company C	Company D
Firm's features	Entrepreneurial posture	Entrepreneurship Innovation	Global mindset	Entrepreneurial posture
Top-management support	The presence of top managers is key in the negotiation step			
Organizational level of decision making	Strategic decisions – top management Operation decisions – sourcing area			
Internal articulation between areas	Closer relationship between the areas: sourcing, engineering, R&D and, to a lesser degree, sales			
Industry's characteristics	Innovation	Innovation	Geographic concentration Movements against the deindustrialization process	Geographic concentration

company and the suppliers and to establish better sourcing conditions, even though they are not responsible for the operational process because it is carried out by the sourcing unit in Brazil. The sourcing unit of Company D is located in China and is responsible for supporting the sourcing negotiations made by the sourcing area, which is located in Brazil, and for monitoring the potential suppliers.

The companies without sourcing units abroad look for other ways to establish a presence in the supplier market. Company A and Company C report the use of a trading company to support its activities, especially when working with new markets. They use the knowledge of the trading company regarding the suppliers located in the specific countries or specific products. Figure 5 summarizes these findings.

SUPPLIERS’ MANAGEMENT

The analysis of the GS process begins with an investigation of the supplier’s management. To understand how this activity is conducted, the first investigated aspect was the supplier’s selection. All companies highlighted the importance of international fairs as a way to identify potential suppliers and to maintain the relationships with cur-

rent suppliers in addition to the proximity of the R&D and engineering areas for the analysis of potential suppliers.

Company I highlighted the fact that they require customized products that must be in accordance with Brazilian regulations, which led the company to a more complicated process for supplier selection because it must understand their needs and work in accordance with them. Location is important because the company usually works by load consolidation, and the proximity of the current suppliers can represent an opportunity to include the new supplier into the logistical strategy of the company. The history of the supplier is analyzed by Company 5, in particular, with respect to how long the supplier has existed “because with the growth of China a lot of new companies start up” says the Company’s interviewee. Company 5 is also focused on the cost analysis. The company has found a correlation that the average price typically possesses the expected quality. This experience has become standard for the company: the company focuses on average prices to avoid taking risks with bad quality products.

The supplier’s management process already absorbed the global dimension of

FIGURE 5 – Key aspects of the organizational structure – Part 3

	Company A	Company B	Company C	Company D
The structure of purchaser presence in the supplier relationship	The use of a trading company when necessary	Sourcing unit – USA Sourcing unit – Germany	The use of a trading company when necessary	Sourcing unit – China
Motivations related to the presence of the purchaser in the supplier market	Access to the trading company’s knowledge	Supplier relationship management Negotiation	Access to the trading company’s knowledge	Support sourcing negotiations made by the sourcing area located in Brazil Monitor the potential suppliers
Relations with centralization vs. decentralization	-	Decentralized negotiation process	-	Centralized negotiation process

the supplier market and the involvement of suppliers in new product development happens at all four companies. The Company 1 is aware of the interfaces of its areas with the supplier, such as that with the engineering department. Company 4 highlights that it has worked with some suppliers for more than ten years, making the supplier development process a continuous process to keep these relationships. Company 6 notes that the ability to develop a supplier faster than a competitor allows the company to launch innovation in their market faster. However, to achieve that innovation, it is necessary to maintain an open communication process between the technical areas of the two companies.

With respect to indicators, Company 1 uses “supplier performance” as a major indicator for all suppliers. Company 6 presents three indicators, including delivery time, product rejection and costs. Only Company 5 uses an indicator specifically related to GS, the “percentage source abroad.” Company 5 started by importing raw materials and has had the strategic

orientation to increase this indicator based on sourcing more complex items.

The third investigated aspect is the management of the supplier relationship. Company 1 states that cultural distance can lead to difficulties in the relationships with the suppliers. Relationship is very important to ensure competitiveness when products are being developed together. Company 4 believes that the relationship with a supplier must be developed over time. “In the beginning of every year we make an annual forecast. We always act very transparent with the suppliers. These estimates are not contracts and may increase or decrease. This is clear and transparent at the beginning of the negotiations with the suppliers.” As a result, Company 4 realized that its suppliers put more effort into their relationship. Company 5 believes that the continuity of visiting the overseas suppliers is one way to maintain the relationship with them. Figure 6 summarizes these findings.

The previously literature do not allow us to distinguish the supplier’s management process related with the use of local and

FIGURE 6 – Key aspects of the supplier’s management

	Company 1	Company 4	Company 5	Company 6
Supplier selection	Focus on understanding the company’s needs by the suppliers – Relationship building process Product attributes	Two orders for performance evaluation (delivery and quality)	Localization History of the supplier (year of foundation) Average price	Quality (product, delivery and relationship)
Supplier development	Product development with suppliers			
Indicators	Not well specified	-	Percentage sourced abroad	Delivery time Product rejection Costs
Supplier relationship management	Reduction of the cultural distance Close communication Protecting intellectual property from competitors	Close communication	Close communication Visits to supplier sites The establishment of procedures	Close communication

global suppliers. The biggest difference between local and global suppliers is scale. The need to change scale leads to GS so that a company can source from international suppliers. The use of international suppliers can be a replication of the local supplier practices. It is based on the increased total quantity purchased when searching for larger suppliers. A reduction of the intermediate companies in existence between the manufacturer and the supply companies is a second reason for that use. Company 4 states that if they find a local supplier with the same quality and cost, then they prefer to source locally; however, they usually are not able to identify competitive local suppliers. As a result, they must manage cultural distance to achieve the desired benefits when dealing with global suppliers.

THE PURCHASING PROCESS

The analysis of the purchasing process is related to the investigation of the input features and how they are considered in this process. There is a consensus that the items ordered from abroad must be considered strategic by the companies because of the risks and complexity associated with this process. As a result, Company 4 identified a disconnection between supply and R&D: “(R&D) is worried with the item, independent of its country of origin”. To understand how the companies classified their inputs as strategic, the use of a pur-

chase portfolio was investigated. Company 1 developed its own portfolio. Company 5 and Company 6 also use a portfolio. Company 4 does not have a purchase portfolio. The findings are summarize in Figure 7.

Regarding the investigation of the purchasing process, the sourcing teams and their qualification were investigated. The necessity of qualified personnel, reinforced by continuous training, is a very important aspect in the adoption of GS for all investigated companies. The existence of training and benefits programs were also observed at the companies. The four investigated companies stated that the empowerment of the sourcing team is related to the communication channels inside the company, such as the opportunity to talk directly with the engineer responsible for a project or the availability of the full directory when a decision must be made faster. The focus of empowerment is the reduction of negotiating time by solving problems faster. Figure 8 summarizes these findings.

The availability of communication tools was the first topic asked. For opportunity sourcing, the results of this research demonstrated that companies use the Internet as the main tool and then move to information management within the companies. According to the interviewee from Company 1, “when you are developing a product there is the specification, the detailed scope and the experience with the

FIGURE 7 – Key aspects of the purchasing process – Part 1

	Company 1	Company 4	Company 5	Company 6
Input features	Imported items are strategic	Importance of the item and cost analysis	Importance of the item and quantity analysis	Importance of the item and delivery time analysis
Use of a purchasing portfolio	Yes Variables: not identified	No	Yes Variables: input value	Yes Variables: input value and supply characteristics

FIGURE 8 – Key aspects of the purchasing process – Part 2

	Company 1	Company 4	Company 5	Company 6
Professional's knowledge and skills	Language skills Technical skills Negation skills	Language skills (English) Technical skills	Language skills (English) Technical skills	Negotiation skills International trade skills
Training and benefits programs	Languages (100% supported) Undergraduate and graduate (50% supported)	Under development	Support not pre-defined	Languages, undergraduate and graduate (50% supported)
Empowerment	Negotiation aspects in accordance with technical area			

things that did not work,” which is maintained in the database and is directly related to the engineering area.

The communication and information flows with the suppliers were also investigated. Companies 4 and 5 argue that they keep an open line of communication and information flow based on annual forecasts. With respect to information accuracy, all companies presented arguments related to its importance, but they did not present a formal process related to verifying its accuracy.

However, the learning process related to GS was highlighted by the companies, and formal structures were developed to support this process at Company 1, Company 4 and Company 6. The first effort related to the learning process is the documentation of GS activities. Even when the company does not have a formal process supported by software, the changes are recorded as

well as the details of the process. Figure 9 summarizes these findings.

FINAL CONSIDERATIONS

Regarding the companies' organizational structure, we identify that there is a tendency to the centralization of the sourcing activities. There is also a stronger interaction between engineering and R&D with the sourcing area, but the interaction with the sales area is weak. Regarding the formalization of the sourcing process, it is partial formal and partial informal. The second group of investigated constructs comprehended the firm's features, the top-management support, the organizational level of decision making and the internal articulation between areas. It was identified that the entrepreneurial posture plays an important role in GS, and the presence of the top managers is key in the negotiation step. All strategic decisions are made by the top managers and

FIGURE 9 – Key aspects of the purchasing process – Part 3

	Company 1	Company 4	Company 5	Company 6
The availability of communication tools	The use of software to support sourcing decisions			
Communication and information flows	As necessary	Shared annual forecast	Shared annual forecast	As necessary
Information accuracy	Non-structured process			
Learning process	Structured process	Structured process	Non-structured process	Structured process

the operational ones by the sourcing team. Through the investigation of these constructs, a new one was identified: the industry's characteristic. The previously literature about GS does not mention the influence of the industry in the firm organizational structure. This aspect requires more deeply investigation and the proposition presented below can be used as a guide to that.

Proposition 1. The organizational structure of a firm to adopt GS is influence by its industry sector's characteristics.

Proposition 1a. The need of innovation in an industry sector influence the organizational structure of its companies to adopt GS.

Proposition 1b. The geographic concentration in an industry sector influence the organizational structure of its companies to adopt GS.

Regarding the presence of the sourcing company in the supplier country, it was found that even just two companies have IPOs, the other two tried to establish a presence abroad establishing a partnership with a trading company. As the literature review related with this construct was limited, we argue that more research is required to understand the presence of the sourcing company abroad.

Looking at the GS approach, the involvement of suppliers into new product development is an unexplored aspect. Considering that GS leads to a close relation between purchasers and suppliers, it is reasonable to question how is the engagement with global suppliers with respect to new product development. Will the intra-departmental approach required by GS support a better relationship with suppliers on this process? At the same time, global suppliers can represent a more difficult relationship comparing with local suppliers

because of cultural differences, distance and other factors.

It was identified that there is a difference between the use of local and global suppliers: the need of scale. Companies that source globally need to place big orders as their suppliers may impose restrictions to small orders. The need of scale was not identify in the previously literature related with GS and requires a deeply investigation.

Proposition 2. The need of scale may influence the process of GS.

We also identified that the cultural distance between the sourcing company and their supplier can influence the supplier's management process. The purchasing portfolios usually do not consider this aspect, as they do not make a difference between imported and local purchased inputs. It was identified that therefore, all imported inputs become strategic, even though they may not necessarily be strategic based on their features. There is a need to re-structure the purchasing portfolios in order to make the distinction between suppliers from home country and abroad to avoid the position of all suppliers from abroad as strategic.

The close communication desired by the companies represents a way to manage suppliers. The relationship aspect was also identified as very important to the companies, even though they face difficulties as a consequence of the cultural distance between them and their suppliers.

The use of a wider array of communication tools as a characteristic of the companies that adopt GS was not identified in our study. The companies presented a worry with information flow and its management process; although they lack a formal process to take oversee it. Ad-

ditionally, these companies present some of the capabilities suggested by Wilding and Braithwaite (2007) as necessary for the proper management of communication and information flow, in particular, the clear identification of products. Because of the non-structured processes, the learning process may be non-effective because part of the process may not be monitored in the integrated system.

Proposition 3. As a consequence of the lack of structure to conduct GS, the learning process may be non-effective because part of the process may not be monitored.

This research was limited by the focus on the investigation of four Brazilian's companies. We argue that more research is required focusing on a larger number of Brazilian companies and other emerging countries' companies.

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